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## BRITISH HONDURAS

### REPORT OF THE DEPARTMENT OF AGRICULTURE FOR THE YEAR ENDED 31st DECEMBER, 1949.

#### AGRICULTURE IN THE COLONY.

##### WEATHER CONDITIONS

1. Following on the below-average rainfall of 1948 the year 1949 produced one of the most severe droughts ever experienced in the Colony; in the Northern, Western and Belize Districts agricultural effort was brought almost to a standstill by the failure of the regular and the many successive plantings; by the end of the year home-stored reserves of grain and seed were considerably reduced and in many cases completely exhausted; livestock losses were severe owing to the failure of pastures and water supplies. In the Stann Creek and Toledo Districts rainfall conditions were closer to normal but only very limited surpluses of food crops were available to offset the hardships in the drought-stricken districts. Conditions changed for the better in December and welcome rains fell in all areas encouraging the planting of beans and vegetables.

2. As a result of the unprecedented drought fires were widespread throughout the Northern half of the Colony; there were, however, no other extremes of weather and the Colony was spared from storm or hurricane.

3. Rainfall statistics are appended at the end of this Report.

##### AGRICULTURAL POLICY

4. The Agricultural Policy Committee, under the Chairmanship of the Director of Agriculture, completed its work during the year and a comprehensive report was submitted to Government; the Report was presented to the Legislative Council for consideration and was accepted with minor amendments in November.

#### GENERAL CONDITIONS AND PROGRESS IN THE CHIEF INDUSTRIES.

##### CITRUS

5. Total exports of the Citrus Industry were valued at \$528,619 as compared with \$432,824 in 1948; exports were as follows:—

|                  |    |    |    |    |    |    |    | Quantity | Value             |
|------------------|----|----|----|----|----|----|----|----------|-------------------|
|                  |    |    |    |    |    |    |    |          | \$                |
| Grapefruit       | .. | .. | .. | .. | .. | .. | .. | cwt.     | 61,794 230,870    |
| Oranges          | .. | .. | .. | .. | .. | .. | .. | "        | 1,771 4,370       |
| Grapefruit Juice | .. | .. | .. | .. | .. | .. | .. | lbs.     | 3,313,912 288,872 |
| Orange Juice     | .. | .. | .. | .. | .. | .. | .. | "        | 58,243 4,438      |
| Lemon Juice      | .. | .. | .. | .. | .. | .. | .. | "        | 932 69            |
| Total Value      |    |    |    |    |    |    |    |          | \$528,619         |

6. Exports of fresh grapefruit were valued at \$230,152 more than those of 1948 while the value of grapefruit juice exports fell by \$140,601.

7. The industry experienced a favourable year and considerable expansion is under way in the Stann Creek District, concentration being on Valencia Oranges. Smaller cultivations in the Northern and Belize districts suffered from the abnormal drought conditions but fruit found a fairly satisfactory retail market locally.

##### COCONUTS

8. The Coconut industry, already suffering from general unthriftiness of cultivations, was hard hit by the drought and yields were severely curtailed; exports comprised 1,807,004 nuts valued at \$82,618 and 134 cwt. of copra valued at \$825; the total export value of \$83,443 was only 64 per cent of the 1948 figure of \$154,429.



9. Copra appears in the list of exports for the first time in several years; the export market consists purely of nuts leaving such copra as is manufactured to supply the local market concerned with oil expression for soap manufacture; no statistics are available for local consumption.

#### BANANAS

10. Production continued to decline due mainly to *Cercospora* Leaf Spot disease, no control of which is attempted in the scattered plantings; by the end of the year, however, Messrs. British Honduras Enterprises had commenced work on a project for large-scale production of Lacatan bananas in the Stann Creek Valley and considerable impetus to the industry was in prospect.

11. Exports, almost wholly of Gros Michel bananas from peasant growers, totalled 58,556 stems valued at \$38,269; 1948 exports were 113,919 stems valued at \$65,057.

#### SUGAR AND RUM

12. The Corozal Sugar Factory had a good crop and manufactured 2,108.31 tons of sugar from 18,621.97 tons of cane ground, an extraction ratio of 8.83 tons of cane per ton of sugar. (1948—9.71).

13. 352 tons of sugar valued at \$39,413 were exported to the United Kingdom during the year.

14. Production of brown sugar in the Toledo District amounted to 112 tons; all was sold locally.

15. There were 9 distilleries in operation during 1949; these produced a total of 35,486 liquid gallons equivalent to 53,195.691 proof gallons of rum. No rum was exported. Revenue from Excise Duty on rum was \$162,774.

16. Though the dry conditions in the Northern Districts were ideal for the crop season, cultivations suffered considerably from the continued drought; regrowth was retarded and any extension of cultivation was impossible. In the South some extension of planting was done.

#### FOOD CROPS

17. *Corn (Maize)*. Every effort was made to encourage the planting of food crops throughout the Colony but in the drought stricken areas production was impossible. The year started with reasonable home-stored grain reserves in all areas and a substantial bulk reserve resulting from the activities of the Marketing Board, which had purchased a large portion of the 1948 crop during 1948 and purchased a further 50,390 lb. in early 1949; owing, however, to restricted storage facilities it was necessary to dispose of the bulk reserve and 18,404 cwt. or 920 tons valued at \$95,494 was exported; by the end of the year it was apparent that Importation of corn would be necessary to keep food supplies going during 1950.

18. Early in the year loans were issued by the Marketing Board to encourage corn planting; these covered 5,445 acres; the total estimated acreage to be planted to corn was 10,000 acres; the greater proportion of this acreage, though replanted several times, produced nothing.

19. *Rice*. Rice production has continued to increase and in the Toledo District a satisfactory crop was reaped. Growers in the Northern Districts, where rice growing is coming more and more into favour, were, however, completely restricted by the drought.

20. Purchases of padi by the Marketing Board amounted to 1,018,000 lb; an appreciable portion of the crop is retained by growers for home use. The area under rice during 1949 was estimated at 2,400 acres; loans covering 1,939 acres were made to growers by the Marketing Board.

21. In July the Colony was visited by Mr. Gerald Lacey, C.I.E., M.I.C.E., who was sent on a special mission by the Colonial office to investigate the possibilities of large scale rice production. Mr. Lacey in his report recommended that rice projects be started in the "Dump" area in the Toledo District and in the Mussell Creek area in the Belize District; action on this report must, however, await the necessary funds and in this connection it is hoped that the report will prove of interest to the Colonial Development Corporation.

22. *Legumes*. In addition to unfavourable conditions in 1948 production of both the local Black Beans and Red Kidney Beans was severely limited by the drought and it was not until December that plantings of Red Kidney Beans were made; good stands resulted for reaping in 1950.

23. *Root Crops.* The staples comprising Cassava, Coco (Tannia), Sweet Potatoes and various Yams were produced in all areas, more particularly in the Southern Districts of the Colony; the standard of cultivation is poor and yields could be improved with better care. Production is entirely for local consumption and at times is inadequate to meet the demand with the result that the general price level is higher than in most other Caribbean territories.

24. Plantains grow well and production is reported to be on the increase; exports were valued at \$2,834.

25. Export values totalling \$728 are recorded for minor produce, preserves and vegetables.

#### COHUNE

26. The kernels of the cohune (*Orbignya cohune*) which grows throughout the Colony, are extracted locally for the manufacture of edible oil for home use; they also find a reasonably good export market and the buying of cohune kernels as a relief measure was started during the year; exports amounted to 5,142 cwt. valued at \$35,807.

#### CACAO

27. Exports of 18 cwt. valued at \$112 are recorded. Interest continues in this crop and developments by the Colonial Development Corporation are eagerly awaited. During the year Mr. David Gillett of Messrs. Cadbury Brothers visited the Colony and toured the areas considered most suitable for cacao cultivation.

#### FISHERIES

28. The fishing industry, apart from supplying local demands, accounted for exports to the value of \$21,235; though the Department of Agriculture is not charged with supervision of Fisheries, the export statistics are inserted as being of general interest; exports were as follows:—

|                         | Quantity | Value    |
|-------------------------|----------|----------|
|                         |          | \$       |
| Fresh Fish .. .. . cwt. | 1,181    | 6,632    |
| Conch .. .. . "         | 12       | 77       |
| Dried Fish .. .. . "    | 37       | 603      |
| Lobsters .. .. . "      | 281      | 3,502    |
| Lobster tails .. .. . " | 557      | 9,500    |
| Shark fins .. .. . "    | 2        | 155      |
| Shark Liver .. .. . "   | 46       | 1,288    |
| Shark Oil .. .. . "     | 12       | 400      |
| Turtle meat .. .. . "   | 6        | 78       |
| Total Value .. .. .     |          | \$21,233 |

#### LIVESTOCK

29. With the exception of the importation of horsekind for improvement of racing stock, there is nothing extraordinary to report in the way of improvement in the Livestock of the Colony. The drought took its toll of animals and it is estimated that 3,500 head of cattle died.

30. Of the three grade Holstein bulls kept by the Department, one died during the year; the others were stationed at the Agricultural Stations in Stann Creek and Punta Gorda respectively; services were not much in demand for these bulls; it may be that the bulls are not entirely suitable; in addition, however, it must be remembered that average conditions under which livestock are kept in the Colony do not allow of any controlled breeding.

31. Pigs are reported to be on the increase but good sires are lacking; of the six Berkshire boars owned by the Department four died during 1949; no funds have been made available for replacing these animals which have been doing useful work.

32. Two private individuals have imported breeding stock but the local demand for good breeding animals far exceeds the supply.

33. Sheep and goats receive little attention; their numbers are few and their condition poor. There would appear to be excellent prospects for sheep raising while the introduction of good milch goats should pay dividends provided they are properly managed and cared for.

34. Poultry are widely kept and introductions of new stock are fairly frequent; there is much to be desired however, in the general conditions of management and the lack of locally produced feeds makes intensive poultry keeping an expensive proposition when all dependence must be on imported feeds. Turkeys thrive in the Colony and should be capable of improvement.

35. The Veterinary Officer reports that his services and those of the Farm Demonstrators stationed in the districts have been more in demand than ever before. There are many handicaps to any sort of organised work in the Colony; in addition to the shortage of staff, village communities are widely scattered and transport facilities are limited; standards of livestock management are deplorably low and there is an absence of "stock-mindedness" in the Colony that baffles the officer who can appreciate the part that livestock should and must eventually play in the local economy.

36. A supply of veterinary drugs and remedies was maintained in each district during the year; in a turnover of \$866.75 actual issues and scales amounted to \$650.67.

37. In November 1948 a shipment of mineral supplements was received from the United Kingdom; during 1949 supplies were exhausted and a further order placed; the value of sales was \$290.00.

38. Major contagious and infectious diseases among livestock were reported and recorded monthly both for Government records and for the Research Council of the Caribbean Commission. These were recorded for the year to 31st December, 1949 as follows:—

| Disease                           | No. of cases |
|-----------------------------------|--------------|
| Brucellosis (contagious abortion) | 4            |
| Fowl cholera                      | 317          |
| Distemper—canine                  | 16           |
| Distemper—equine                  | 9            |
| Mange—canine                      | 22           |
| Mange—equine                      | 6            |
| Fowl pox                          | 372          |
| Pullorum                          | 30           |
| Stomatitis (ulcerative)           | 6            |
| Swine erysipelas                  | 4            |
| Typhoid—cholera—fowl              | 619          |
| Tetanus—equine                    | 6            |

39. No definite diagnosis of contagious abortion was obtained. Out of over 200 head of cattle that have been submitted for tests, no reactions have been found; therefore as these 4 cases were of a suspicious nature and as no blood tests were available, they were classed as contagious and treated as such.

40. All cases of Pullorum were reported soon after arrival in this Colony of chicks from the U.S.A. Definite diagnosis was made and birds treated accordingly. The farm from which these chicks were imported was notified and no further cases have been reported since. No cases of this disease have been reported as having originated in the Colony. Minor ailments such as colics, wounds and worms still prevail among the livestock.

41. The following table shows the number of animals slaughtered for food purposes during 1949:—

| Animals    | Stann<br>Creek | Cayo | Belize | Punta<br>Gorda | Corozal | Orange<br>Walk | Total |
|------------|----------------|------|--------|----------------|---------|----------------|-------|
| Bulls ..   | 64             | 183  | 1,387  | 2              | 17      | 2              | 1,655 |
| Cows ..    | 31             | 25   | 623    | 2              | 20      | 19             | 720   |
| Heifers .. | 6              | 78   | 180    | 1              | 10      | 2              | 277   |
| Steers ..  | 25             | 4    | 184    | 5              | 30      | 74             | 322   |
| Swine ..   | 133            | 273  | 5,516  | —              | 302     | —              | 6,224 |
| Sheep ..   | 14             | 38   | 211    | —              | —       | —              | 263   |
| Goats ..   | —              | —    | 28     | —              | —       | —              | 28    |

These numbers represent the following weights:—

Beef —568,918 lb.;      Pork —281,043 lb.;  
 Sheep — 12,782 lb;      Goats — 1,126 lb.

## SOIL CONSERVATION.

42. Soil conservation is not practised in the Colony and it is only on the new Baking Pot Central Farm that a start has been made to run contour lines in all land cleared for cultivation.

43. The need for soil conservation measures was clearly shown on a large-scale vegetable production effort in the Cayo District; the December rains, though totalling under six inches, did considerable damage to the crops and caused much soil loss. The Cayo District shows considerable soil erosion in the limestone hills. Even on the gentle slopes of the Northern District soil erosion can be observed. In the Toledo District, and particularly in the Stann Creek District, soil erosion will loom as a major problem on the sloping lands now being opened up for citrus and banana cultivation.

## IMPORTATION OF FOODSTUFFS

44. The following table shows the values of the imports of major foodstuffs during 1948 and 1949:—

|                                  | 1948<br>\$ | 1949<br>\$ |
|----------------------------------|------------|------------|
| Livestock for food .. .. .       | 25,553     | 5,950      |
| Biscuits, Bread & Cakes .. .. .  | 29,461     | 32,856     |
| Butter .. .. .                   | 113,141    | 133,693    |
| Butter Substitutes .. .. .       | 37,669     | 16,219     |
| Cheese .. .. .                   | 50,550     | 41,022     |
| Cocoa, Prepared .. .. .          | 7,235      | 18,857     |
| Coffee .. .. .                   | 26,517     | 21,148     |
| Fish, Preserved .. .. .          | 17,023     | 21,677     |
| Rice .. .. .                     | 250,467    | 162,649    |
| Flour .. .. .                    | 495,251    | 421,870    |
| Peas and Beans .. .. .           | 104,310    | 90,757     |
| Lard and Substitutes .. .. .     | 133,803    | 90,041     |
| Beef and Pork in barrels .. .. . | 98,044     | 85,520     |
| Preserved Meat .. .. .           | 60,241     | 64,848     |
| Ham and Bacon .. .. .            | 19,030     | 26,222     |
| Milk .. .. .                     | 415,904    | 319,731    |
| Sugar—Refined .. .. .            | 25,715     | 23,478     |
| Spices .. .. .                   | 6,207      | 4,574      |
| Vegetables .. .. .               | 80,941     | 66,023     |

## MARKETING

45. As already reported in previous paragraphs the Marketing Board which replaced the Board of Agriculture in 1948, made loans totalling \$16,986 available to farmers to encourage the growing of corn and rice; the Board also purchased and provided a guaranteed market at guaranteed prices for these products. Operations during the year included the running of the Rice Mill in Punta Gorda and the formulation of plans for the erection of a modern Rice Mill in Belize. Relief measures comprised the purchasing of cohune kernels on Government's behalf and the sale of corn at subsidised prices.

46. The Director of Agriculture is a member of the Marketing Board; the Board's operations in the field, such as inspecting lands in connection with loan applications, issuing of loans, purchasing of produce and, it is to be regretted, the collection of loans and interest owing to the Board, were carried out by the field staff of the Department.

## WORK IN THE DEPARTMENT OF AGRICULTURE.

### STAFF

47. Mr. C. W. L. Fishlock, Director of Agriculture, left the Colony on vacation leave on November 5th.

48. Mr. G. B. Gregory, appointed to the new post of Senior Agricultural Officer, arrived in the Colony on November 15th and was appointed to act as Director of Agriculture.

49. Mr. S. A. W. Boyd, Junior Agricultural Instructor, was granted 6 months vacation leave from 31st October.

#### PLANT AND SEED INTRODUCTION AND DISTRIBUTION.

50. Various introductions of planting material were made during the year; in addition, regular importations of vegetable seeds were made for retail to farmers; in addition to sales of vegetable seeds the following plants were distributed from the Department's nurseries:—

|                  |    |    |    |    |              |
|------------------|----|----|----|----|--------------|
| Valencia Oranges | .. | .. | .. | .. | 3,531 plants |
| Other Citrus     | .. | .. | .. | .. | 835 "        |
| Mangoes          | .. | .. | .. | .. | 207 "        |
| Other economic   | .. | .. | .. | .. | 154 "        |

51. Other sales comprised over 800 lb. of cyanogas for "wee-wee" ant and "ground mole" control, 3,450 lb. of seed corn and 105,000 lb. of corn sold in connection with relief work.

#### WORK AT THE AGRICULTURAL STATIONS.

52. Further "deactivation" of the Agricultural Stations took place. The Corozal Station was reduced to provide merely office and residential facilities for the District Agricultural Officer. The Orange Walk Station only provided inadequate office accommodation for the Senior Farm Demonstrator since the Resident Officer's quarters had been lent to the Public Works Department for housing the Feeder Roads Engineer and the office proper was occupied by the manager of the Tobacco trials being conducted under the Import Control Department. Funds allocated to the Stann Creek Station were sufficient only for indifferent maintenance and for nursery work concentrating on Citrus; nursery work with Cacao, Manilla Hemp and Lacatan Bananas was also done for the Colonial Development Corporation with funds provided by the Corporation. The Agricultural Station at Punta Gorda was restricted to maintenance of a reduced area and rice variety trials.

53. The policy of closing and abandoning what has been developed from nothing into useful Agricultural Stations is questionable, particularly when the Department is endeavouring more and more to foster food production and agriculture generally; the average farmer has no agricultural tradition and the process of getting him into farming habits will be a long one; with him an ounce of demonstration will go further than a hundredweight of talking; it is claimed that the Agricultural Stations, particularly in the Northern Districts, have played a great part in encouraging the planting of fruit trees etc. and demonstrating the way to a better system of agriculture; to suddenly stop all the demonstrations and merely redouble the talking can well cause the farmer to doubt both the Department's ability and its sincerity.

54. Small plots of the Sugar Cane varieties B.37161, B.3337, B.34104, B.41211, B.41227 and B.4098 were maintained but there was no demand for planting material and no further propagation to provide material for a variety trial or trials was undertaken.

55. In Stann Creek the Citrus orchards were used for grazing livestock in an attempt to control excessive weed growth; the citrus crop was a reasonable one and sales amounting to \$929.97 were made to the Citrus Company.

56. By arrangement with the Colonial Development Corporation the Department undertook nursery work with Cacao, Manilla Hemp and Lacatan Bananas at Stann Creek; expenses were met by the Corporation. Work was handicapped by dry conditions and the lack of an efficient water supply.

57. Cacao seedlings totalling over 90,000 were raised from seed selected by the Assistant Agricultural Officer but by the end of the year the bulk of the seedlings were becoming overgrown and there were no prospects of their utilisation by the Corporation, which then decided to keep 40,000 plants and offer the remainder for sale; there was, however, no demand.

58. Three varieties of Manilla Hemp (*Musa textilis*) were established over 4½ acres. Growth was fair considering that no irrigation was possible and conditions were drier than normal; by the end of the year disposal by the Corporation was awaited.

59. A nursery of 4 acres of Lacatan Bananas was also established to provide a nucleus of plants for the areas being cleared at Alta Vista further up the Valley; growth was satisfactory though Cercospora Leaf Spot was troublesome.

60. In addition to the nursery work at Stann Creek a grass-planting project was started at the Baking Pot Central Farm for the Colonial Development Corporation; despite the

abnormally dry conditions, by the end of the year  $7\frac{1}{2}$  acres of guinea grass had been established; Jaragua grass (*hyparrhenia rufa*) failed to grow.

61. Production and distribution of citrus and other economic plants have already been reported in paragraph 48.

62. In conjunction with the Lacatan Banana nursery project for the Colonial Development Corporation, a 2 acre Lacatan nursery was established with Colonial Development and Welfare funds; growth was good, some stems being shot at the age of seven months. The Colonial Development Corporation assisted with regular spraying for Leafspot control.

63. In Toledo District the Punta Gorda Station concentrated on further work to purify and multiply six leading rice varieties for further distribution; in addition all the varieties were planted in Progeny Row plots for further selection; B.G.79 was used as the standard variety.

64. Of the swamp rices, B.G.79 headed the list with 2,920 lb. per acre, followed by Lead (2,096 lb.) Demerara Creole (1,950 lb.) and D.114 (1,200 lb.). Of the three Upland varieties tried Barley (1,188 lb.) led the standard B.H. Creole (1,118 lb.). All these were dibbled.

65. An experiment with broadcasting seed returned Lead (1,980 lb. per acre), D.114 (1,720 lb.), B.G.79 (1,610 lb.) and Demerara Creole (1,460 lb.).

#### THE BAKING POT CENTRAL FARM.

66. The Baking Pot Central Farm, on which work was started in the last quarter of 1948, got off to a poor start for its first clear year of operation. Work was rushed during the dry months in preparation for the rains which then failed to arrive; by the end of November only 19.61 inches had fallen for the year and it was only the 5.58 inches that fell in December that pushed the year's total to 25.19 inches. With the 7 year (1941-1947) average for the town of El Cayo, only 5 miles distant, at 54.28 inches, it was anticipated that the Baking Pot area would average around 55 inches, or more than double the 1949 rainfall.

67. Development of the property went ahead, however, and by the end of the year the following works had been completed:—

(1) Two story office block, with office accommodation for all Headquarters staff, Farm Office, Store and Tool room.

(2) Living quarters for the Senior Agricultural Officer and 2 of the Clerical staff.

(3) Mechanic's quarters, garage and implement shed renovated and taken over from the Public Works Department.

(4) 18 "bush" houses erected for labourers.

(5) An area on the bank of the Belize River allocated to the Boys' Training School fenced and buildings almost completed by the Public Works Department.

68. On the field side the following work was done:—

(1) An area of some  $1\frac{1}{2}$  acres fenced and provided with a water supply for vegetable growing.

(2) A temporary pasture of 10 acres part cleared and fenced.

(3) Approximately 50 acres cleared, logs etc. ranged into approximate contour lines, rough harrowed and planted to corn, rice, peanuts, sweet potatoes, yams, sesame and cotton.

(4) The whole estate of 1,500 acres surveyed by the Survey Department.

(5) Miscellaneous boundary fencing done.

(6) A road of some  $1\frac{1}{2}$  miles constructed by the Public Works Department to connect the Boys' Training School with the main Belize-Cayo Road; while taking material for this road from a large Maya Indian mound, an interesting ruin was discovered; further excavation, with attendant damage to the structure, was stopped; the estate is rich in Maya Mounds and broken pottery, flint implements etc. frequently come to light in the course of field operations.

69. All crops failed on account of drought conditions and it was only in December that any germination was obtained; advantage was taken of the rains to plant quick-maturing crops of Red Kidney Beans, Peanuts, and Sesame, and propagation plots of root crops.

70. The vegetable garden was cropped throughout the year and the produce was in great demand not only in the District but also in Belize.

71. Sporadic trouble was experienced with the resident labour force of ex-servicemen, almost all recruited from Belize, which were sent to the Farm in late 1938; of 52 men recruited, 31 had been returned to Belize by the end of the year. In a Colony of nearly 9,000 square miles and under 70,000 population, it is amazing to find that almost one-third of the population is resident in the main city of Belize, that city itself being completely isolated by sea, swamp and

Pine Ridge from any form of agriculture; admitted that the unemployment problem in Belize is acute, but it is impossible to expect the Belize element to become, almost overnight, able and interested farmers.

72. When the estate was purchased in 1948 a herd of 40 cattle was selected and taken over; by the end of 1949 there were 61 head of cattle and 4 horses; a local half-bred Holstein bull was purchased and put at the head of the herd; this was later replaced by an imported Holstein-Zebu bull which had been imported from Trinidad some time previously.

73. 6 sows, 3 barrows and 16 piglets were moved to the Farm from various stations and a Berkshire boar installed for service; the first boar died from Orchitis and had to be replaced. Accommodation for the pigs was poor and they did not keep good condition.

74. A Model "M" Allis-Chalmers tractor, removed from the Corozal Agricultural Station, did good work though breakdowns were frequent; other implements were "salvaged" from the Agricultural Stations and were used as and when they were in working order. By the end of the year the two motor trucks were in poor condition, one being unservicable.

75. It is to be regretted that thorough land clearing work was not done; much of the difficulty with already poor implements was caused by the large number of stumps etc. left in the land which was originally under high Santa Maria forest.

76. Great interest was taken in the progress of the work on the Farm and a special visit was paid by a delegation of members of the Legislative Council.

#### PESTS AND DISEASES

77. In August the Colony was visited by Dr. F. J. Simmonds, Entomologist of the Commonwealth Bureau of Biological Control with headquarters in Trinidad; the information in the following paragraphs is based on his report.

78. The major pest of the Colony is the "wee wee" ant, *Atta cephalotes*; as yet nothing has been found to replace "Cyanogas" as a destroying agent.

79. On coconuts the Coconut Scale, *Aspidiotus destructor*, is widespread, though apparently controlled by certain species of Ladybird beetle, chief of which is *Chilocorus cacti*. The Rhinoceros beetle, *Rhynchophorus palmarum*, is present in several areas.

80. Citrus scale insects were noted but there were numbers of several species of Coccinellids (Ladybirds) on the trees. *Anastrepha ludens*, the Mexican Fruit Fly, was not seen by Dr. Simmonds but it is present in the Colony and is a potential danger to the Citrus industry.

81. Sugar Cane was observed to be affected by Froghopper, *Tomaspis* sp.; this pest is known to cause extensive damage at times. The small Moth Borer, *Diatraea* sp., exists in the Colony but damage was not great.

82. Cotton pests recorded were stainers, *Dysdercus* sp., and the Mexican Boll Weevil, *Anthonomus grandis*; careful experimental plantings are recommended before cotton can be regarded as a crop for the Colony.

83. Pests of vegetables included *Plutella maculipennis* on cabbage and cauliflower; *margaronia hyalinata* on cucurbits and *Contarinia lycopersici* on tomato.

84. On corn (maize) records were made of *Laphygma frugiperda* and *Heliothis obsoleta*, the corn earworm; dusting of harvested ears with DDT or Gammaxane is recommended for controlling weevils in stored corn.

85. In this connection, Mr. Stephen S. Easter, Entomologist on the staff of the Food and Agriculture Organisation of the United Nations, visited the Colony in December at the request of the Colonial Office to observe conditions of grain storage. Mr. Easter met the Marketing Board and discussed storage problems with the Board, suggesting improvements to the existing facilities and making recommendations for pest control.

86. The Pocket Gopher or "ground mole" is an important pest in most areas; trapping appears to offer the best means of control.

87. As regards diseases, Panama Disease and Cercospora Leaf Spot of bananas are the major offenders; the former, which is still widespread in the Colony, destroyed the first banana industry based on the Gros Michel variety and the latter is an ever-present threat to the new industry which is in prospect based on the Lacatan variety. No other diseases of direct importance have been recorded.

## AGRICULTURAL AND INDUSTRIAL EXHIBITION.

88. The Exhibition, arranged by the Agricultural Instructor, with the assistance of a local Committee, was held in Punta Gorda in December under the patronage of His Excellency the Governor who opened the Show.

89. 460 entries were received and 228 prizes were awarded. Exhibits were arranged by the Agricultural, Forestry and Social Development Departments and by Messrs. James Brodie and Co. Ltd. of Belize.

## DEVELOPMENT AND WELFARE SCHEMES.

90. The following paragraphs cover Development and Welfare Schemes which were in operation during the year.

91. *D.13B Prizes for Small Farms.* Expenditure during 1949 amounted to \$82.40; a Small Farms Competition was held in the Toledo District with the following results:—

1st Prize: Thomas Tulcey, Toledo Settlement; 1 cow

2nd Prize: Mrs. A. Engleton, Mile 17; Half bred sow

3rd Prize: Miss Josephine Richards, Toledo Settlement; trio of Red Hampshire Poultry.

Consolation Prizes of Ground Mole traps were awarded to Z. Moore, Sr., and O. Samuels of the Toledo Settlement and R. Williams of Mile 17. There were only 16 entrants, including 2 from Monkey River.

92. *D.229 Local Food Production.* Expenditure during 1949 was \$12,860.79; this was mainly in connection with the payment of salaries and allowances of the staff of Farm Demonstrators employed under the scheme.

93. *D.981A and D.981B. Baking Pot Central Farm.* Expenditure amounted to \$57,931.32. This scheme provides for the purchase of the Baking Pot Estate (completed in 1948) and for Capital expenditure in connection with the establishment of the Department's headquarters and the development of the Central Farm; the work done during the year has already been covered in preceeding paragraphs.

94. *D.1236 Livestock Officer Scheme.* A grant of \$41,660 to cover the appointment of a Livestock Officer for 5 years was approved in November.

## LAND INSPECTIONS.

95. The field staff of the Department is charged with the inspection of land which has been allotted for alienation under the Location Ticket system; inspections were made during the year and reports made to the Director of Surveys.

## EXPENDITURE AND REVENUE.

96. A statement of Expenditure and Revenue of the Department is presented below. It is of interest to note that of the Colony's total Expenditure of \$2,771,437 (excluding Development and Welfare Schemes) the expenditure allocated to Head 5, Agriculture, amounted to \$107,478.94 or 3.87 per cent. This figure includes the sum of \$46,591.86 representing losses on the Marketing Board, Board of Agriculture and Marketing of Cohune for Relief inserted under Head "Agriculture" for convenience; the true expenditure of the Department for 1949 is therefore \$70,887.08 or only 2.55 per cent of the total for the Colony.

## FINANCIAL STATEMENT.

### EXPENDITURE

| Head 5—Agriculture |                                             |    |    |    |    |    |    | \$        | ¢ |
|--------------------|---------------------------------------------|----|----|----|----|----|----|-----------|---|
| 1.                 | Personal Emoluments                         | .. | .. | .. | .. | .. | .. | 32,247.33 |   |
| 2.                 | Transport Allowances                        | .. | .. | .. | .. | .. | .. | 782.48    |   |
| 3.                 | Travelling                                  | .. | .. | .. | .. | .. | .. | 3,706.78  |   |
| 4.                 | Running and Maintenance costs of vehicles   | .. | .. | .. | .. | .. | .. | 2,183.33  |   |
| 5.                 | Freight on Plants, etc.                     | .. | .. | .. | .. | .. | .. | 520.11    |   |
| 6.                 | Scientific Equipment                        | .. | .. | .. | .. | .. | .. |           |   |
| 7.                 | Samples, Investigations and Trial Shipments | .. | .. | .. | .. | .. | .. | .85       |   |
| 8.                 | Incidentals                                 | .. | .. | .. | .. | .. | .. | 102.94    |   |
| 9.                 | Upkeep of Farm Equipment                    | .. | .. | .. | .. | .. | .. | 1,288.82  |   |
| 10.                | Upkeep of Buildings..                       | .. | .. | .. | .. | .. | .. | 299.54    |   |
| 11.                | Labour                                      | .. | .. | .. | .. | .. | .. | 14,195.45 |   |

# FINANCIAL STATEMENT—continued

|                            |                                                    |    |    |    |    |    |              |
|----------------------------|----------------------------------------------------|----|----|----|----|----|--------------|
| 12.                        | Control of pests and diseases                      | .. | .. | .. | .. | .. | 2,827.51     |
| 13.                        | Implements and Tools                               | .. | .. | .. | .. | .. | 559.59       |
| 14.                        | Revenue Producing Operations                       | .. | .. | .. | .. | .. | 5,746.95     |
| 15.                        | Fees for Services of Veterinary Officer            | .. | .. | .. | .. | .. | —            |
| 15a.                       | Relief Clerk                                       | .. | .. | .. | .. | .. | 67.93        |
| 15b.                       | Housing of Farm Demonstrators                      | .. | .. | .. | .. | .. | 467.15       |
| <i>Special Expenditure</i> |                                                    |    |    |    |    |    |              |
| 16.                        | Agricultural Extension Work                        | .. | .. | .. | .. | .. | 3,811.51     |
| 17.                        | Purchase of Fencing Wire                           | .. | .. | .. | .. | .. | 1,000.00     |
| 18.                        | New Jeep                                           | .. | .. | .. | .. | .. | 1,950.00     |
| 19.                        | Boats and Doreys                                   | .. | .. | .. | .. | .. | 179.18       |
| 20.                        | Visits of Specialists                              | .. | .. | .. | .. | .. | 435.76       |
| 21.                        | Veterinary Equipment and drugs                     | .. | .. | .. | .. | .. | 513.87       |
| 22.                        | Loss on operation of Marketing Board               | .. | .. | .. | .. | .. | 24,266.05    |
| 23.                        | Loss on marketing of Cohune nuts (Relief Scheme)   | .. | .. | .. | .. | .. | 11,628.96    |
| 24.                        | Unadjusted Loss on working of Board of Agriculture | .. | .. | .. | .. | .. | 696.85       |
|                            |                                                    |    |    |    |    |    | \$107,478.94 |

## REVENUE

| Head  | Subhead |                                                        | \$         |
|-------|---------|--------------------------------------------------------|------------|
| 4     | 8       | Sale of Government Stores                              | —          |
| 4     | 14      | Sale of Produce and Plants etc., Agricultural Stations | 3,281.27   |
| 4     | 15      | Sale of material for control of pests                  | 23.06      |
| 4     | 28      | Fees for Veterinary Officer's services                 | 16.68      |
| 4     | 31      | Receipts from Central Farm                             | 649.29     |
| 4     | 32      | Veterinary Officer's Incidental expenses               | 15.61      |
| Total |         |                                                        | \$3,985.91 |

## AGRICULTURAL EXPORTS 1949

| Items                              | Quantity       | Value   | Total Value |
|------------------------------------|----------------|---------|-------------|
|                                    |                | \$      | \$          |
| <i>Citrus</i>                      |                |         |             |
| Grapefruit, fresh                  | 61,794 cwt.    | 230,870 |             |
| Grapefruit, Juice                  | 3,313,912 lb.  | 288,872 |             |
| Oranges, fresh                     | 1,771 cwt.     | 4,370   |             |
| Oranges, juice                     | 58,243 lb.     | 4,438   |             |
| Lemon, juice                       | 932 lb.        | 69      | 528,619     |
| <i>Fruits, Other</i>               |                |         |             |
| Coconuts                           | 1,807,004 no.  | 82,618  | 82,618      |
| Bananas                            | 58,056 bunches | 38,269  | 38,269      |
| Sugar, unrefined                   | 7,038 cwt.     | 39,413  | 39,413      |
| <i>Food Crops</i>                  |                |         |             |
| Plantains                          | 8,661 bunches  | 2,834   |             |
| Corn                               | 18,404 cwt.    | 95,494  | 98,328      |
| <i>Cohune</i>                      |                |         |             |
| Copra                              | 5,142 cwt.     | 35,807  | 35,807      |
| Cocoa, Raw                         | 134 cwt.       | 825     | 825         |
| Jams, Jellies and Preserved fruits | 18 cwt.        | 112     | 112         |
| Vegetables, fresh                  | 2 cwt.         | 34      | 34          |
| <i>Fishery Products</i>            |                |         |             |
| Conch                              | 14 cwt.        | 78      | 78          |
| Fish, fresh                        | 12 cwt.        | 77      |             |
| Fish, dried                        | 1,181 cwt.     | 6,632   |             |
| Lobsters                           | 37 cwt.        | 603     |             |
| Lobster Tails                      | 281 cwt.       | 3,502   |             |
| Shark Fins                         | 557 cwt.       | 9,500   |             |
| Shark Liver                        | 2 cwt.         | 155     |             |
| Shark Oil                          | 46 cwt.        | 1,288   |             |
| Turtle Meat                        | 12 cwt.        | 400     |             |
| Alligator skins                    | 6 cwt.         | 78      | 22,235      |
| Shark skins                        | 132 cwt.       | 14,633  | 14,633      |
| Total Value of Exports             |                |         | \$861,593   |

BRITISH HONDURAS  
SUMMARY OF RAINFALL FOR THE YEAR 1949

| District or Station                    | Jan.  | Feb. | Mar. | Apr. | May  | June  | July  | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Total  |
|----------------------------------------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|--------|
| <i>Corozal District</i>                |       |      |      |      |      |       |       |       |       |       |       |       |        |
| Corozal Town .. ..                     | 1.76  | 1.17 | —    | —    | 1.50 | 1.10  | 1.78  | 2.15  | 6.30  | 5.70  | 2.37  | 6.64  | 30.47  |
| Corozal Agricultural Station .. ..     | 2.77  | .98  | .17  | —    | 2.42 | 1.51  | 1.98  | 2.29  | 6.18  | 6.63  | .98   | 3.53  | 29.44  |
| <i>Orange Walk District</i>            |       |      |      |      |      |       |       |       |       |       |       |       |        |
| San Estevan .. ..                      | 7.55  | 4.29 | —    | —    | 3.71 | 3.06  | 1.98  | 5.50  | 6.27  | 15.29 | 2.80  | 4.94  | 55.39  |
| <i>Belize District</i>                 |       |      |      |      |      |       |       |       |       |       |       |       |        |
| Belize .. ..                           | 3.10  | 4.10 | .12  | .03  | .84  | 3.12  | 5.17  | 5.85  | 8.17  | 8.30  | 5.05  | 10.18 | 54.03  |
| <i>Cayo District</i>                   |       |      |      |      |      |       |       |       |       |       |       |       |        |
| Baking Pot Central Farm .. ..          | 2.90  | .44  | .96  | .13  | —    | 3.32  | 1.21  | 2.45  | 4.21  | 2.03  | 1.96  | 5.58  | 25.19  |
| <i>Stann Creek District</i>            |       |      |      |      |      |       |       |       |       |       |       |       |        |
| Stann Creek Town .. ..                 | 3.94  | 1.88 | 1.60 | —    | —    | 2.15  | 12.54 | 6.48  | 12.60 | 7.14  | 2.52  | 9.50  | 60.35  |
| Stann Creek Agricultural Station .. .. | 5.57  | 2.22 | 3.17 | .17  | 1.63 | 4.87  | 4.26  | 5.75  | 8.22  | 6.23  | 1.63  | 6.88  | 50.60  |
| Middlesex .. ..                        | 4.41  | 3.07 | 2.30 | .36  | 1.07 | 3.54  | 7.44  | 7.19  | 9.08  | 12.61 | 11.44 | 8.87  | 71.38  |
| <i>Toledo District</i>                 |       |      |      |      |      |       |       |       |       |       |       |       |        |
| Punta Gorda Town .. ..                 | 26.77 | 7.05 | 3.42 | 1.00 | 7.33 | 12.05 | 20.58 | 27.08 | 18.80 | 20.25 | 2.83  | 14.80 | 161.96 |
| Punta Gorda Agricultural Station .. .. | 10.13 | 5.37 | 1.13 | .30  | 2.78 | 9.99  | 17.06 | 19.45 | 14.73 | 14.25 | .82   | 13.32 | 109.33 |

